

Abstract

A deoiler 26 for separating oil from air contaminated with the oil has at least one separator for separating the oil from the air and also has a source of suction for reducing air pressure at the source of the air. In an exemplary embodiment, the deoiler 26 creates the suction at a first operating condition, but acts as a restrictor at a second operating condition. A deoiling method according to the invention creates suction at a first operating condition to reduce the air pressure at the source of the oil-contaminated air, establishes a flow restriction at a second operating condition to pressurize the air source, and encourages oil to separate from the air at both operating conditions. When used as a component of a turbine engine lubrication system 22, the source of contaminated air may be a buffered bearing compartment 16. The inventive deoiler ensures a positive pressure difference across the bearing compartment seals 20 at the engine's idle power setting without requiring the idle setting to be undesirably high, and without requiring the use of buffer air whose pressure at higher engine power is high enough to be detrimental. In an exemplary embodiment, the deoiler pressurizes the bearing compartment at higher power settings to resist excessive buffer air infiltration into the bearing compartment.